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Docket 500024-19

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Joy Johnson  
Joy Johnson

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of	:	Group Art Unit: 2634
Ronald M. Hickling	:	Examiner: Young T. Tse
Title: Direct Conversion Delta-Sigma Receiver	:	<b>RECEIVED</b>
Serial No.: 09/241,994	:	MAY 08 2003
Filed: February 2, 1999	:	Technology Center 2600
Commissioner for Patents Washington, D.C. 20231	:	

**DECLARATION OF PRIOR INVENTION IN THE UNITED STATES TO OVERCOME  
CITED PATENT OR PUBLICATION (37 C.F.R. § 1.131)**

**PURPOSE OF DECLARATION**

This declaration is to establish completion of the invention in this application in the United States, at a date prior to both of the following reference dates:

- a) August 29, 1995, which is the 102(e) date of the De Vries et al reference, U.S. Patent No. 5,736,848; and
- b) August 12, 1997, which is the earliest foreign priority date of the Reber reference, U.S. Patent No. 6,393,071.

The person making this declaration is the inventor.

## DECLARATION

I, Ronald, Hickling, am an inventor of the invention that is the subject of this application. I declare as follows:

1. I conceived of the microwave frequency delta-sigma receiver that is the subject of this application at least as early as 1994. In that year Techno Concepts, which is the assignee of this invention, held discussions with another company regarding using and developing our company's analog-to-digital conversion technology. Those talks led to a development contract with a company called Omnipoint.

2. As part of the development contract with Omnipoint, we performed a theoretical design of various features of the present invention and performed simulations of our design. The simulations were successful in that they demonstrated that important features of the design model worked successfully. Attached as Exhibit 1 is a document entitled, "A Digital I-Q Demodulator for PCS" dated July 20, 1995. That document is our final report to Omnipoint.

3. We did not sell any microcircuit chips or software to Omnipoint at that time. The contract was merely a confidential development contract rather than a contract for delivery of a physical product.

4. We then started reducing the invention to practice, by beginning work on detailed chip-level and board-level designs. By approximately late 1997, we had performed the detailed chip-level physical design, had given the design documents and files to a semiconductor foundry, had worked with the foundry to produce a prototype chip, and had received the prototype chip back from the foundry. We installed the chip

U.S. Serial No. 09/241,994

Docket 500024-19

on a prototype circuit board, and began testing the prototype board at various frequencies.

5. By approximately early 1999, we had worked out several design problems, and had a working chip and circuit board that successfully operated at the microwave frequencies at which the invention was intended to operate.

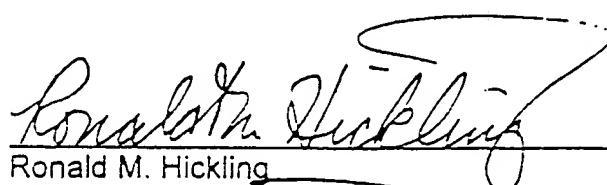
6. We contacted a patent attorney and requested that a patent application be filed. The present application was filed on or about February 2, 1999.

7. Exhibit 2 is a PERT chart from our files for this project showing various steps taken to develop and proof the design.

8. In sum, I conceived the microwave frequency direct conversion delta-sigma receiver of the present invention at least as early as 1994, and worked diligently to reduce the invention to practice and to file a patent application for this invention.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine, imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Dated: November 30, 2002

  
Ronald M. Hickling

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